

THE CHRONICLE

of Early American Industries

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Witch-Hazel

by JASON ALMUS RUSSELL

The witch-hazel thickets on the old homestead acres always appealed to us children for their grace and beauty. In the springtime their leafbuds unfolded into dull green patches, olive-drab in color. And in spite of the hired man's frequent clearing of the nearby woodlot, this shrub survived and flourished.

Even the very name of *witch-hazel* intrigued us. Our more unimaginative neighbors had no less interesting appellations for the shrub; spotted alder, from the nature of its bark; winterbloom, from the lateness of its flowering; and tobacco-wood, from the taste of its bark.

In mid-November, the witch-hazel blossomed. We could never decide whether or not the wine-fragrant blooms, each one with its four narrow strapshaped golden petals, was the first of the New Year's blossoms or the last of the old. After the leaves had turned and dropped to the ground, the flowerets bloomed, gilding the spindling bushes with such a rich yellow color that it seemed to us they were dusted lightly with golden Indian meal, glistening against the pale gray-and-spotted bark of twigs and trunk.

Even while the flowers appeared, the fruits developed from the previous season's blossoms, maturing in an open-topped "button," holding in its case bullet-shaped seeds. Indeed, the contraction of these seed-envelopes often discharged the fruit fifteen or twenty feet out.

Drowsing

Even in my childhood *drowsing* was rapidly becoming a lost art. Many years before that time almost every New England village had one or more of these so-called water-wizards who, for a sum of money would cut a forked witch-hazel rod, carry it in front of them like the two handles of a plow with

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The Paper Industry in American Life

by CHARLES I. FOSTER

During the span of fifty years, 1810-1860, our production of paper increased very rapidly. According to the Gallatin report of 1809, paper imports had practically ceased in that year; the country was on a self-sustaining basis in this respect. The census of the following year found us with 202 paper mills, sixty-four of them in New England and an equal number in Pennsylvania. The value of their product was about one and one-half million dollars. Figures quoted are those of Tench Coxe in his report based upon the census of 1810, quoted by "Member of the Staff of the *Paper Trade Journal*."

Fifty years later, the nation boasted 555 paper mills which produced over twenty-one million dollars' worth of paper. By 1860, New England had taken the leadership away from Pennsylvania and was producing one-half of the nation's paper supply. Massachusetts mills, in turn, made one-half of New England's total.

The essential fact which we may learn from these statistics is that paper production increased fourteen-fold in dollar value. Since there was little difference in paper prices at these two dates, the physical production increased to the same degree. (Paper production statistics for 1810 are in reams rather than in pounds, but a rough calculation of ream weight gives an average price of 8c lb. The average for 1860 listed in the 8th Census returns was 8.9c lb.) If we allow for the increase in population which took place in the same half-century, we find that the consumption of paper per person in the United States had increased a little over three times.

This remarkable growth in the use of paper is the fact which we wish to investigate from the point

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of view of social history as well as that of economic history. We would like to know just why there arose this greater demand for paper, what were the social implications of its use, and then we would trace the measures by which a struggling industry met this mounting call for its product. In other words, this is a study of the complementary aspects of our social and industrial life. We did not manufacture this paper in a social vacuum; we did not multiply our production fourteen-fold simply because it was physically possible for us to do it: private enterprise in this instance responded to a vast market created by factors of social change in American life.

The nature of this market, this pressure upon our papermaking facilities, may be deduced to a certain extent by the volume of various types of paper which we were producing in 1860. Industrial and wrapping papers were coming into wider use but they represented only about thirty per cent of our production. Better postal service, with the rising tempo of our social and economic life, needed a large volume of writing paper, but this accounted for only about ten per cent of the market. The largest factor by far was the urgent call for printing paper which required about sixty per cent of the output of our mills in 1860, a total of 131,508,000 pounds.

The social implications of this situation are of tremendous importance. Worcester's leading printer, Isaiah Thomas, estimated that in 1810 the country had over four hundred printing offices. By 1825, there were 698 printers and the productive capacity of their art had been greatly increased with the introduction of the steam-driven press and the stereotype plate. In this period, the literature of the common man was born in a host of newspapers, periodicals, tracts, pamphlets and cheap books.

The character of this flood of literature for the common man, which placed such a strain on our printing and papermaking ingenuity, is of great interest to the historian. Much of it carried news and information to its readers but the great common denominator of this period of publication was propaganda. Each sheet of paper served some organized effort directed toward changing and shaping American life. These causes were political and religious efforts at reformation, benevolent and humanitarian impulses, schemes for social improvement and economic experiment.

At that time, the "American way of life" was in a formative stage; there was an atmosphere of im-

pending change and drunken optimism. American society was in a state of flux. The Tory aristocracy of colonial days was gone and while many of our people were busy scrambling for the seats left vacant, there was as Alexis DeTocqueville, in *De la Démocratie en Amérique* suggests no class in a position to impose a standard of conduct upon the community. The forces of social disintegration were on the rampage; the westward movement was in full swing; America was footloose and free of restraint. Family ties were loosening in pervading atmosphere of freedom, change and opportunity. Michael Chevalier in his *Society, Manners and Politics in The United States* (1839) commented, "The Yankee will sell his father's house like old clothes or rags. In his character of pioneer, it is his destiny to attach himself to nothing . . . except his wife . . ."

An outstanding characteristic of this formative period before the Civil War was the violence of American life. On the frontier there was fighting of the most unrestrained order: gouging, biting, kicking, duels at short range with rifles, shotguns and knives. In the cities, gangs of toughies ruled the streets, fire companies brawled, juvenile delinquency was a painful problem and riot was a common occurrence.

On the whole, this American social scene, with restraints of tradition broken loose, offered what one observer found by C. B. Goody Koontz, described as a "*tabula rasa*, upon which every man who had a positive idea was free to write a theory . . ." It is easy now to recognize the pattern which was drawn on this *tabula rasa* of our pre-Civil War days: it was American Victorianism, our own version of the British reaction to the French Revolution.

This 'Victorian movement was of tremendous power in shaping the American way of life. In general, it meant refinement and restraint. The American male was obliged to wipe the tobacco juice from his chin and the mud from his boots and prepare himself for polite society; he had to learn to take more than five minutes to gulp his dinner and then to pick his teeth delicately behind his napkin with a gold-mounted ivory or quill toothpick; he had to go to church, get religion, become benevolent and respectable.

The American woman, too, underwent a marked change. She altered her mode of dress and with it, as usual, her nature. She discarded the free and

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easy style of the Napoleonic period for a stiff, heavy, voluminous garb which obscured her effectively from chin to toe; she wafted herself over the floor without visible means of support, a female by inference only. She became "the better half," the fragile custodian of the nation's sentiment. She was the most active promoter of Victorianism through work in benevolent societies and religious organizations; she brought her rough partner to heel by fainting promptly when exposed to the least rudeness. While in law she remained her husband's slave and chattel, in sentiment she climbed a pedestal far above him, his goddess.

One of the most serious and absorbing duties of Victorian womanhood was benevolent work to advance the success of societies of a moral and religious nature in which she became the familiar "female auxiliary." Riding the wave of a tremendous religious revival between 1800 and 1840, these societies swept the country and became the instrument by which Victorianism imposed its rule upon the social life of the United States. In this period as A. M. Schlesinger, in *Biography of a Nation of Joiners*, points out, we became "a nation of joiners": it was said of us that two Americans could not meet on the street without someone calling the meeting to order. Counting their membership in the hundreds of thousands, the societies with their auxiliaries and branches swarmed in the east and advanced westward with the frontier.

In the religious sphere these organizations distributed Bibles and tracts, formed Sunday schools, financed foreign and home missions, the education of ministers and the Protestant crusade against the Catholics. In the closely allied field of reform, they fought the country's two most bitter social battles: the antislavery movement and the struggle for the free, non-sectarian common school. They led the temperance reformation to save the nation from the demon rum, carried programs of prison and debt reform, legal protection for workers on land and sea, and won notable concessions for women's rights.

This vast movement of social organization and activity has a direct bearing upon our problem of paper production because these societies lived, moved and had their being on paper to a considerable extent. Their weapon of offense and defense was the printed word. To a very high degree, they were societies of publication. As one anonymous enthu-

From the Utica, N. Y., Patriot, February 1, 1814.

TO PRINTERS

The subscriber, who has had eight years experience in the business of manufacturing

Printing Ink

has now established a factory in the town of Verona, (on the road from Oneida Castle to Rome) where he intends to keep on hand all kinds of Printing Ink, of a superior quality, and which will be warranted not to change its color, and flatters himself he will be enabled to furnish Printers in the Western District, with as good Ink as can be had in New York, or elsewhere, and on more reasonable terms. — Persons wishing to see the quality of his Ink, are requested to call at the office of the Patriot, where a comparison can be made between his ink, and that from the best Factory in New York.

Verona, August 9, 1813

—BERRY CHASE.

Paper Industry—Concluded

siast explained,

"On other methods of action there are great clogs; but the Press is not restrained by such inevitable delay. It is all ready, and full grown, and the way is open before it. The material with which it can operate, even in our own language, is at this moment extant in ten thousand books and tracts; the accumulated and digested wisdom of all past time. The stereotype plate will yield its half million of impressions before it ends its work, and the steam press will cast off sheets at the speed of two thousand an hour. The railway and the canal are at the printer's door, and the whole country is within a few weeks' reach of the place of manufacture . . . Let the reader cast his eye over the vast expanse of our territory, and imagine it covered, as it must soon be, by fifty millions speaking one language; and let him picture to himself every family of all those millions, supplied with the bible, and then with a succession of pleasing and edifying religious works."

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Shoemaking in New England

by AMOS E. JEWETT

A New England Shoemaker's shop presented to the Rowley Historical Society, in 1941, was owned and used by Moses Paul Payson (1820-1877). Shops like this were very common in New England during the nineteenth century, the regulation size being about ten by twelve feet, accommodating from one to five workmen. These shops gave occupation not only to the men whose business was shoe making but to many a farmer who worked in the shop during the winter and was thereby able to add to his oftentimes slender income. Once a week those who worked in the small shops would get from the manufacturers, who lived in the larger towns, a set (sixty pairs) of uppers, soles, welts and rands, etc., to use in the making.

The women had a part in the work, doing the "closing" or stitching of the uppers, using an awl and a waxed end made of shoe thread. This work was generally done in the house, but sometimes a woman would work in the shop with her husband, in this preparation for the assembling of the shoe.

In the early days the shoemaker, like the tailor, traveled from house to house and made the shoes for the family. Before the advent of pegs all shoes were sewed, not only the uppers but the soles, and the workman was called a cordwinder or cordwainer. When pegs came into general use the sewing on of the sole was largely done away with. Pegs were made of maple or birch wood sawed into the required thickness to give the pegs the right length, and laboriously split from the block and pointed by hand. Before the middle of the nineteenth century, Paul (Peg) Pillsbury of Byfield, invented a machine for making shoe pegs. These were sold by the quart and the shoemaker had to furnish them.

Not only shoes but high top boots were sometimes made in these shops, twelve pairs constituting a set. These were "closed" or sided by the women, wrong side out so that the seam would be on the inside when the boot was turned. The turning, which was done by hand, was very difficult. The invention of a very simple machine by Henry P. Boynton of Rowley, did away with the hand turning.

These shoe shops, very erroneously called cobblers' shops, scattered in so many of the small towns throughout New England, rivalled the old-time grocery as meeting places for friendly intercourse and gave great opportunity for discussion of current topics.

Linchpin Wagon — Continued

As a result of the publication of my letter in *The Chronicle*, I have received from Mr. Frank K. Swain of Doylestown, Pennsylvania, the following letter on the linchpin wagon which provides a good deal of interesting and valuable information on this early type of vehicle, or rather, on this early type of wheel-and-axle construction.—*Floyd C. Shoemaker, Secretary, The State Historical Society of Missouri.*

"I believed *every* wagon was of the linchpin type when blacksmiths would have to make nuts by hand and thread them and the axle end by hand also. This is a ticklish job and do you realize that the nuts used on the wheels on right side of wagon, which turn clockwise cannot be used on the left side as these must not turn clockwise or the running wheel would unwind then and they and the wheel would fall off. On both sides they must be put on and tightened in the direction the wheel turns and this tends to tighten them.

This means the smith would have to have two dies for turning the threads and rather difficult either way for the nut. When nuts etc. were threaded by machinery, much later, they were used on pleasure wagons, carriages and light wagons with small axles. It made a cleaner, neater job. And I would say there was a distinction made and the heavy wagons were designated as linchpin for the first time.

Wagons carrying very heavy loads, hay, manure, logs, market produce and for farm use must have an axle, hubs, etc. in proportion to that load and the axles are quite large—too large almost for a nut cap and, as neatness need not be considered, the old linchpin was retained. It is used on farm machinery, hay rakes, etc., etc.

When I was a boy, in the 90's linch pins were quite common on farm wagons and a square hole had to be made in the metal band around the outer side of the hub so the linch pin could be pried up and removed through the hole.

Unfortunately, I have no photos at this time and I don't know of an old wagon within ten miles at the present time. I cannot remember seeing a wrench large enough to unscrew the cap nut from a big hay wagon. I doubt if a cap nut was used—always linchpins.

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As long as *all* wagons had linchpins the name would not be applied to a wagon. When some were made with cap nuts of course there was reason to distinguish between them. Of all the names I've heard for different types, surreys, chaise, cutter, buggies, Dayton, Germantown, gigs, traps, Conestogas, market, sulky, etc. I've never heard one called linchpin.

It was a messy job to pry the linchpin up, pick it out and lay it aside, grease the axle and put the linchpin back in place — four of them per wagon. As soon as cap nuts could be supplied readily, machine made ones, they did away with this mess on pleasure carriages at least. That's the way I see it.

If someone told me they bought a linchpin wagon I would suppose it was one with a linchpin axle but I wouldn't have the least idea of what kind except that it was very large and heavy for rough work on the farm. There would be several kinds of linchpin wagons — the bodies at least would be different and axles, hubs, etc. made to suit the load."

Many thanks to both Mr. Shoemaker and Mr. Swain.—Ed.

The Wenzel Air Clock

by W. B. STEPHENS

In the early 1930's there came into my hands from an old building in California, a curious looking contraption, the like of which I had never seen. Its most noticeable feature at first glance was a bar extending across the top and bearing at each end an inverted bell jar which hung over a glass jar directly below. In addition to the bar and jars were geared wheels, cams, pipes, levers, weights, and a long pendulum, carrying at its end a nine-pound pendulum bob; but there was no dial nor hands nor any provision for them. The bar with bell jars dipping one, then the other, into the jars below reminded me of the walking beam on a ferry boat. Except for the presence of a legend printed upon the case of the contrivance it might have long remained a mystery. The legend read; "Air clock, H. Wenzel, 328 Kearny Street, San Francisco. Patented October 23, 1877."

Wenzel it turned out, conducted his business of clock and watchmaking and jewelry in San Francisco, and from his headquarters, airlocks were supplied to buildings requiring multiple clocks centrally controlled! They were beautifully made and were

accurate, but they required frequent expert attention.

The liquid had to be maintained at the proper height in the jars; if it was too low, the air impulses were not properly sent out, and if too high there was likelihood of the fluid getting into the air tubes and stopping the secondary clocks. The settling and movements of building walls caused breaks in the air lines, frequently difficult both to locate and repair.

At first glance the master clock looks fearfully complicated but may be said to consist of three parts; (1) the two air pumps; (2) the mechanism which causes these pumps to work alternately; and (3) the time-keeping mechanism.

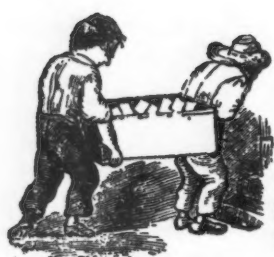
(1) The air pumps are simple affairs. A fairly long, narrow, bell-shaped jar with opening downward is suspended at each end of a bar (the "walking beam") which, as the ends move up and down, alternately dips the bell jars into the glass jars below. The lower jars are filled almost to the top with a solution of glycerine and water. A lead pipe dips down into the jar to the bottom, and then turns up in a U to a point above the level of the solution in the jar. When the bell jar is pushed down into the solution, the air is compressed and so sends out an impulse through the lead pipe to the secondary clocks on that pipe line. Each secondary clock has a small glass jar of glycerine solution with a tube passing up through its bottom and terminating above the level of the liquid. Over this is a correspondingly small bell jar. When the air impulse comes, the small bell jar is raised, and through the lever by which it is suspended a cogged wheel in the secondary clockwork is moved up one tooth, and through the other wheels the hands are moved one minute. The descended bell jar of the master clock now rises, and the other one descends to send out an impulse through the other line. These alternating impulses are at one-minute intervals.

(2) The shifting mechanism which causes first one and then the other bell jar to rise is too complicated for description here. It is only necessary to mention its action and that it is operated by a heavy weight.

(3) The time-keeping part consists essentially of the escapement and its 39½ inch pendulum with its nine pound bob — an arrangement which permits the teeth of the escape wheel to "escape" one tooth at a time with each swing of the pendulum. The motive power for the escapement and the big pen-

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The
Chronicle
issued occasionally for members of
**EARLY AMERICAN
INDUSTRIES ASS'N**

The purpose of the association is to encourage the study and better understanding of early American industry, in the home, in the shop, on the farm, and on the sea, and especially to discover, identify, classify, preserve and exhibit obsolete tools, implements, utensils, instruments, vehicles, appliances and mechanical devices used by American craftsmen, farmers, housewives, mariners, professional men and other workers.

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Communications regarding the contents of The Chronicle should be addressed to the Editor; Suggestions for members and other matters either to the President or the Secretary-Treasurer.

MEMBERSHIP: Regular members contribute \$2.00 annually.

Supporting Members contribute \$5.00 or more a year.

BACK NUMBERS of The Chronicle are available in some instances for fifty cents or one dollar, depending on rarity. Index to Volume I and II is available for one dollar each.

A Message from the President

Your Directors are extremely anxious to increase the number of active members of the Association and would appreciate every member making a determined effort to get at least two new members especially so these new members can take advantage of the wonderful meeting we are planning to have in Cooperstown during the week of July 12th.

At present the dues are as follows:

Regular Members.....\$ 2.00 per year

Supporting Members..... 5.00 per year

Sustaining Members.... 10.00 per year and up

Please make an effort to get as many sustaining members as possible as the Regular Membership doesn't much more than cover the cost of the Chronicle which, of course, goes with each class of membership.

Application blanks for membership can be obtained by writing to Mrs. Josephine H. Peirce, 51

Paxton Street, Leicester, Massachusetts, but a letter with check directed to Mrs. Peirce will be a satisfactory substitute therefor.

In a letter dated April 19th, Mr. John Mardock Connor of Plainfield, New Jersey makes the following fine suggestion:

"I offer for your consideration the suggestion that an effort be made to secure without charge a booth in major antique shows, particularly those held in the south and west, the purpose being to arouse public interest in the work of the E.A.I.A. and increase the membership. The booth should be staffed by members and if possible contain an interesting exhibit."

It would be difficult for the Association to carry out Mr. Connor's most excellent suggestion as an association but it would be helpful if it could be carried out by individual members who are planning to exhibit in any shows or who are close enough to any shows to arrange an exhibit and be available to talk with people about membership in the E.A.I.A. These booths, of course, should be supplied with application blanks and a few sample copies of the Chronicle. But most of all, of course, the exhibit and an enthusiastic member is needed.

Keep in mind the fact that the Association will be just as helpful and interesting to you as the work you put into it and the more people interested in the same hobbies in which you are interested you get into the Association, the more your pleasure will be increased.

Most sincerely,

EDWARD DURELL

Samuel Stocking,

Has just received from Boston and New York, a large supply of STOCK AND TRIMMINGS, comprising almost every article used in the

HATTING BUSINESS

for sale unusually low, for cash or approved notes.

He also continues to manufacture HATS of every description, warranted good, which he will sell on as liberal terms as they can be procured in any part of the state.

N. B. Cash paid for

HATTER'S & SHIPPING FURS

Utica, Jan. 12, 1813

Early American Industries

Witch Hazel—Concluded

the sharpened and inclined end slightly toward the earth. Not only the oldtimers but some reliable eye-witnesses stoutly assert that the end of the divining-rod will turn sharply down into the earth to indicate a spring or water source beneath; and in some cases with such violence that the very bark is twisted off from the wood when the rod is held too firmly in the hands.

Witch-Hazel Remedy

The ten-gallon iron pot hanging from the ancient iron crane in the kitchen fireplace was used for brewing home remedies, the most important of which was witch-hazel. Perhaps no home remedy as witch-hazel derivatives ever attained such an universal reputation for healing. Little has been written about this unusual benefit. Almost all knowledge concerning it has been handed down by word of mouth. The discovery is attributed to an Oneida Indian long years before the coming of the white man who found the redskin using this shrub as an antidote for aches and sprains. First he bruised the bark with a stone ax, and then massaged his injuries with the bark.

My grandparents, indeed, depended much upon home remedies. Grandmother made an infusion in the iron kettle, filling the pot with small pieces of witch-hazel brush which was cut in the late fall and winter when the oils were esteemed to be of a finer quality. The contents were covered with water, and a crude distillation took place over the fire. Kettle distillation fell into disuse about a century ago. Stills began to be built; and one home industry disappeared, while another grew from the cutting, bundling, and marketing of the shrub for commercial distillation.

Even today the commercial process for making this *hamamelis*, or witch-hazel extract, is practically the same as when it was produced in the early days: through a simple crude distillation process the so-called crude witch-hazel is produced from pounds of the witch-hazel brush. The resulting liquid contains both the oil and the odoriferous portion of the shrub. Incidentally the oil is not separated when the product is sold commercially, but grain alcohol is added.

Whatsit Bailey II — Continued

I note in the July *Chronicle* your query regarding Whatsit Bailey II. Perhaps I can be of assistance in naming this piece.

It would appear to be a form of the Hargreave's Spinning Jenny, invented by James Hargreaves in 1764. His machine was of much different shape, being some six feet wide and nine feet long, with the spindles set upright. In the case of the spinning jenny, however, there was a mechanism for clamping the wool slivers and drawing them out by moving the clamping device backward.

In the device illustrated the operator obviously stands on the near side (lower view) and turns the crank. The large wheel is belted to the multi-grooved pulley on the frame. This, in turn, is belted to the separate spindles. The yarn is spun off the open end of the spindle facing the operator. The rod across the above spindles carries two balanced arms which support a light rod. (From the cut there would appear to be a double rod, which is puzzling.) The sliver of wool comes up and over this rod and thence to the spindle. While the twisting is being done the rod is in approximately the position shown. After a length of the yarn has been twisted these arms are rotated (and the pulleys near the corner of the frame would seem to be connected with this operation) so that the yarn comes to the spindle from above. Now, instead of slipping off and twisting as the spindle is turned, it winds onto the base of the spindle.

As it stands it is difficult to understand the practical operation. One would spin one or two strands on this machine as it stands but the use of eight spindles implies one or two other parts. One is a spool rack. The flat board across the frame may have held the spools on which the wool slivers were wound. This appears to be hinged, which would provide another element, the means of moving the spools and spindles back and forth to facilitate the drawing operation. The other needed item is a clamp to hold the slivers of wool while they are being drawn out and twisted. This might be a hand clamp, held in the left hand while the crank was turned with the right hand.—*Russell H. Anderson, Dir. Western Reserve Historical Soc.*



The Chronicle

Communications to the Editor

From Robert T. Crane, Sparta, N. J.

"I am interested in securing all possible published information and photographs on the subject of grist mills. Any information members can supply will be appreciated."

From Loring McMillen, Staten Island Historical Society

"I have ten or twelve duplications of books in my library related to early industries, and would like to exchange them, or make other disposition of them to interested members. I don't know with whom to communicate."

From Penrose R. Hoopes, Philadelphia, Pa.

"Our sister organization, the National Association of Watch and Clock Collectors, has started a reference library of books and manuscripts on horology. The books, which are being donated by the members of the Association, are deposited in the rare book department of the University of Pennsylvania, under the name "The Horological Collection." They are freely available to everyone for reference. Although the project was started only last September, the collection is already (Nov. '47) with nearly 200 items, including the Lockwood Barr manuscripts on Bristol Clockmaking, a number of scarce French pamphlets, most of the printed works relating to Connecticut clockmaking and a good selection of modern books of interest to clock and watch collectors.

This pioneering attempt of a collectors' organization to preserve and advance knowledge in its field will be of interest to many members of the Early American Industries Association. Early clock books frequently describe and illustrate the tools used in making clocks, watches and sundials as well as those employed in the related trades of cabinet making and blacksmithing. Everyone wishing information on clock and watchmaking is cordially invited to make use of the Horological Collection."

From Amos E. Jewett, Rowley, Mass.

"I was particularly interested in the article on the Ox Yoke. We have two: one of the older style, where the draught is by the shoulders or where, to use a down east expression, they are "yoked by the middle"; the other where they are "yoked by the head." I have driven oxen many, many miles. Those in this section were always yoked the older way.

The bench pictured in volume III, number 13 and marked as used by Isaac Haughwout, ca 1830, is not properly a "Cobbler's Bench" although it is almost universally called by that name. It is a shoemaker's bench. When I was a boy seventy years ago, there were at least fifty shoemaker's shops in this town of 1500 inhabitants. There are probably twenty remaining although none are at present used for the purpose of making shoes. Of course in those days when shoes were repaired the work was done on these benches, but you will see at once how ridiculous the idea would be that there were fifty cobbler's shops in a little town. I do not know where said Isaac lived but I know that Haughwout is not a New England name.

Time and again I have been in these little shops and watched the shoes made — also worked at it myself, long ago."

Isaac was from New Jersey. What is the difference between a cobbler and a shoemaker?

For more on Mr. Jewett's shoemakers see p. 132.

The Wenzel Air Clock Concluded

dulum is a small weight fastened to a light bar or rod. This one ounce weight is raised or wound at each rise of the walking beam. It speaks volumes for the accuracy and the delicacy of the workmanship when a weight of this small size can keep such a large pendulum in motion. A clock which is thus wound at the end of each minute or other small interval of time is called a remontoir.

A small undated contemporary pamphlet "Correct Time — Pneumatic Clock, Herman J. Wenzel Inventor and Patentee" states that "Should the winding of the Regulator be neglected it begins to strike a bell for the last twenty-four hours, calling for attention." It also implies that the clocks needed little attention. From my interview with Rudolph Wenzel, the son, I received a different impression.

The career of the air clock closed with the San Francisco earthquake of 1906. All the drawings, patterns, tools and stock were burned; and the shaking and quaking walls wrecked the air lines and the glass jars containing the liquid necessary for their functioning. The advent of electrically controlled clocks undoubtedly contributed too.

Could Herman Wenzel reappear on the scene now, as have his clocks, he would stand in amazement at the change which has placed electric clocks in practically every house — all electrically controlled by a central power house.

